

FIRST AID FOR HEAD INJURIES



Head Injuries

- A head injury may consist of one or a combination of the following conditions: a concussion, a cut or bruise of the scalp, or a fracture of the skull with injury to the brain and the blood vessels of the scalp. The damage can range from a minor cut on the scalp to a severe brain injury which rapidly causes death. Most head injuries lie somewhere between the two extremes.
- The brain is a very delicate organ; when it is injured, the casualty may vomit, become sleepy, suffer paralysis, or lose consciousness and slip into a coma. All severe head injuries are potentially life-threatening. For recovery and return to normal function, casualties require proper first aid as a vital first step.



Signs/Symptoms

- Current or recent unconsciousness (loss of consciousness).
- Nausea or vomiting.
- Convulsions or twitches (involuntary jerking and shaking).
- Slurred speech.
- Confusion.
- Sleepiness (drowsiness).
- Loss of memory (does casualty know his own name, where he is, and so forth).
- Clear or bloody fluid leaking from nose or ears.
- Staggering in walking.
- Dizziness.
- A change in pulse rate.
- Breathing problems.
- Eye (vision) problems such as unequal pupils



General First Aid Measures for Head Injuries

Check Level of Consciousness/Responsiveness: With a head injury, an important area to evaluate is the casualty's level of consciousness and responsiveness. Ask the casualty questions such as--

- "What is your name?" (Person)
- "Where are you?" (Place)
- "What day/month/year is it?" (Time)

Any incorrect responses, inability to answer, or changes in responses should be reported to medical personnel.

Check the casualty's level of consciousness every 15 minutes and note any changes from earlier observations.



General First Aid Measures for Head Injuries

Position the

Casualty: If the casualty is conscious or has a minor (superficial) scalp wound, have the casualty sit up (unless other injuries prohibit or he is unable)

- If the casualty is lying down and is not accumulating fluids or drainage in his throat, elevate his head slightly.
- If the casualty is bleeding from or into his mouth or throat, turn his head to the side or position him on his side so that the airway will be clear. Avoid pressure on the wound or place him on his side--opposite the site of the injury.

WARNING

DO NOT move the casualty if you suspect he has sustained a neck, spine or severe head injury (which produces any signs or symptoms other



General First Aid Measures for Head Injuries

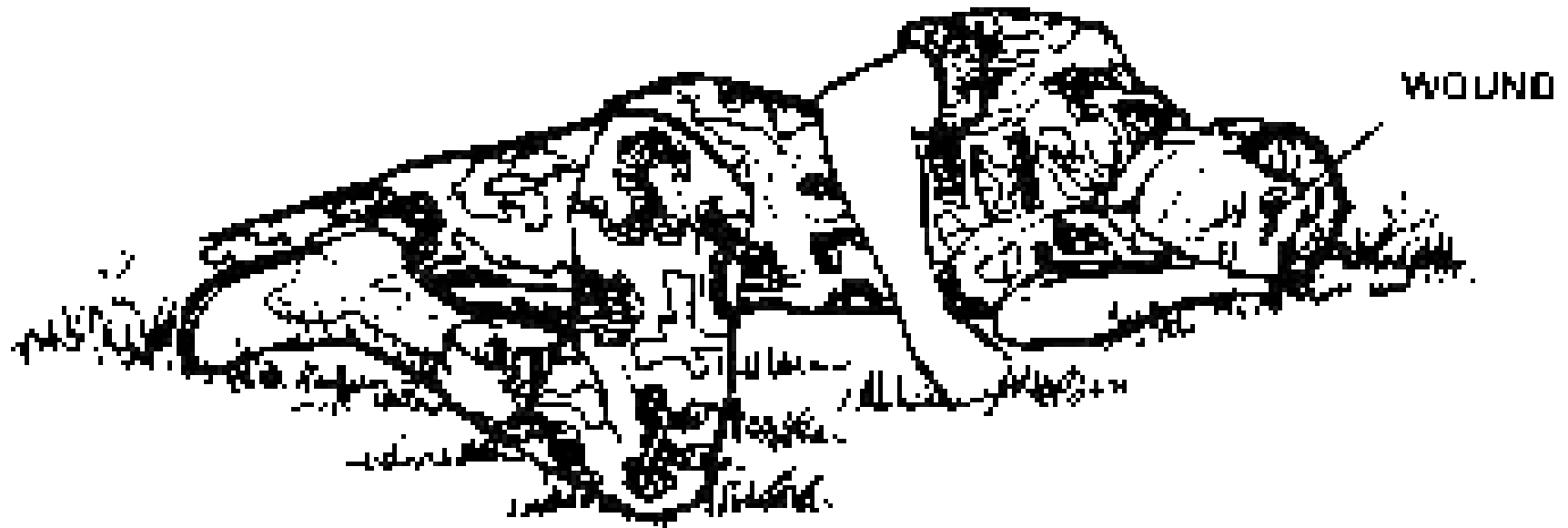


Figure 3-1. Casualty lying on side opposite injury



General First Aid Measures for Head Injuries

Be Prepared to:

- Clear the airway (and be prepared to perform the basic lifesaving measures).
- Treat as a suspected neck/spinal injury until proven otherwise.
- Place a dressing over the wounded area. DO NOT attempt to clean the wound.
- Seek medical aid.
- Keep the casualty warm.
- DO NOT attempt to remove a protruding object from the head.
- DO NOT give the casualty anything to eat or drink.



Care of the Unconscious Casualty

If a casualty is unconscious as the result of a head injury, he is not able to defend himself. He may lose his sensitivity to pain or ability to cough up blood or mucus that may be plugging his airway. An unconscious casualty must be evaluated for breathing difficulties, uncontrollable bleeding, and spinal injury.



Care of the Unconscious Casualty (cont'd)

(1) *Breathing*: The brain requires a constant supply of oxygen. A bluish (or in an individual with dark skin--grayish) color of skin around the lips and nail beds indicates that the casualty is not receiving enough air (oxygen). Immediate action must be taken to clear the airway, to position the casualty on his side, or to give artificial respiration. *Be prepared* to give artificial respiration if breathing should stop.



Care of the Unconscious Casualty (cont'd)

(2) *Bleeding*: Bleeding from a head injury usually comes from blood vessels within the scalp. Bleeding can also develop inside the skull or within the brain. In most instances bleeding from the head can be controlled by proper application of the field first aid dressing. (DO NOT attempt to put unnecessary pressure on the wound or attempt to push any brain matter back into the head. DO NOT apply a



Care of the Unconscious Casualty (cont'd)

Remember to suspect any casualty who has a *severe head injury* or who is *unconscious* as possibly having a *broken neck or a spinal cord injury!* It is better to treat conservatively and assume that the neck/spinal cord is injured rather than to chance further injuring the casualty.



Head Injuries

Concussion: If an individual receives a heavy blow to the head or face, he may suffer a brain concussion, which is an injury to the brain that involves a temporary *loss of some or all* of the brain's ability to function. For example, the casualty may not breathe properly for a short period of time, or he may become confused and stagger when he attempts to walk. A concussion may only last for a short period of time. However, if a casualty is suspected of having suffered a concussion, he must be seen by a physician as soon as conditions permit.



Head Injuries

Convulsions: Convulsions (seizures/involuntary jerking) may occur after a mild head injury. When a casualty is convulsing, protect him from hurting himself. Take the following measures:

- (1) Ease him to the ground.
- (2) Support his head and neck.
- (3) Maintain his airway.
- (4) Call for assistance.
- (5) Treat the casualty's wounds and evacuate him immediately.



Head Injuries

Brain Damage: In *severe* head injuries where brain tissue is protruding, *leave the wound alone*; carefully place a first aid dressing over the tissue. *DO NOT remove or disturb any foreign matter that may be in the wound.*

Position the casualty so that his head is higher than his body. Keep him warm and *seek medical aid immediately.*

(DO NOT forcefully hold the arms and legs if they are jerking because this can lead to broken bones.

DO NOT force anything between the casualty's teeth--especially if they are tightly clenched because this may obstruct the casualty's airway.



General First Aid Measures for Head Injury

- If the casualty is unconscious or has a severe head injury, then suspect and treat him as having a potential neck or spinal injury, *immobilize and DO NOT move the casualty*.
- If the casualty is choking and/or vomiting or is bleeding from or into his mouth (thus compromising his airway), position him on his side so that his airway will be clear. Avoid pressure on the wound; place him on his side opposite the side of the injury.
- If it is necessary to turn a casualty with a suspected neck/spine injury; roll the casualty gently onto his side, keeping the head, neck, and body aligned while providing support for the head and neck.



General First Aid Measures for Head Injury

DO NOT roll the casualty by yourself but seek assistance.
Move him only if absolutely necessary, otherwise keep the casualty immobilized to prevent further damage to the neck/spine.



General First Aid Measures for Head Injury

Expose the Wound

Remove the casualty's helmet (if necessary).

In a chemical environment:

- If mask and/or hood is not breached, apply *no* dressing to the head wound casualty. If the "all clear" *has not been given*, DO NOT remove the casualty's mask to attend the head wound.
- If mask and/or hood *have* been breached and the "all clear" *has not been given*, try to repair the breach with tape and apply *no* dressing.
- If mask and/or hood have been breached and the "all clear" *has been given*, the mask can be removed and a dressing applied.



General First Aid Measures for Head 1

WARNING

DO NOT attempt to clean the wound, or remove a protruding object.

Improvise, take bulky dressings from the cleanest material available and place these dressings around the protruding object for support after applying the field dressing.

(Always use the casualty's field dressing, not your own!)



APPLYING DRESSINGS TO HEAD INJURIES

To apply a dressing to a wound of the forehead or back of the head:

1. Remove the dressing from the wrapper.
2. Grasp the tails of the dressing in both hands.
3. Hold the dressing (white side down) directly over the wound. DO NOT touch the white (sterile) side of the dressing or allow anything except the wound to come in contact with the white side.
4. Place it directly over the wound.
5. Hold it in place. If the victim is alone, he may assist.
6. Wrap the first tail of the dressing horizontally around the head to ensure the tail covers the dressing.



Figure 3-2. First tail of dressing wrapped horizontally around head.



APPLYING DRESSINGS TO HEAD INJURIES (cont'd)

7. Hold the first tail in place and wrap the second tail the opposite direction, covering the dressing.

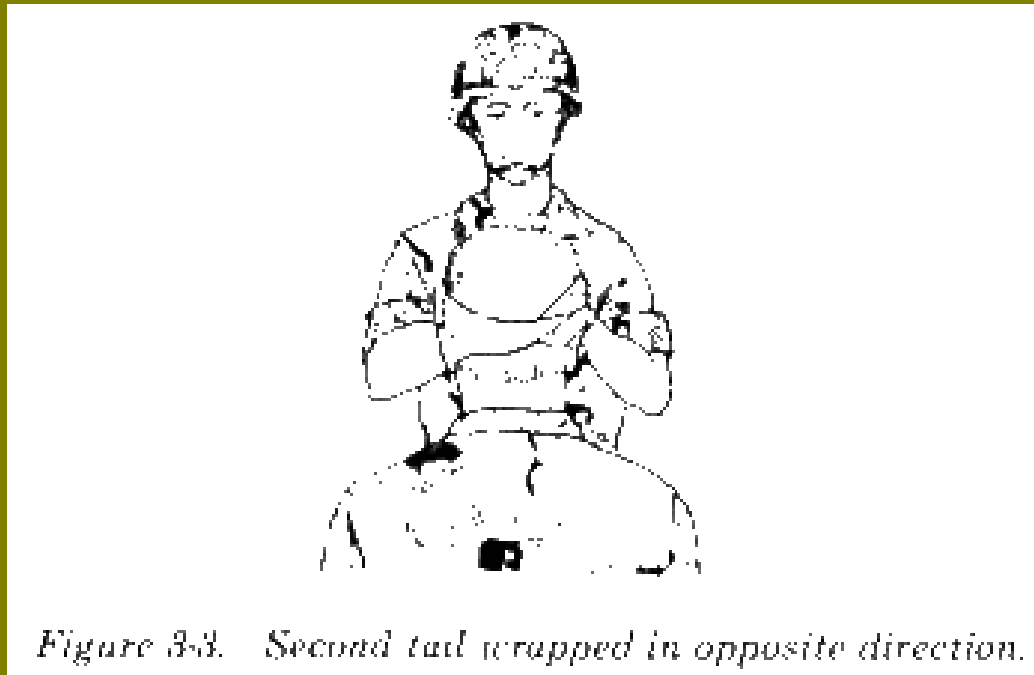


Figure 3-3. Second tail wrapped in opposite direction.



APPLYING DRESSINGS TO HEAD INJURIES (cont'd)

8. Tie a non-slip knot and secure the tails at the side of the head, making sure they DO NOT cover the eyes or ears.



Figure 3-4. Tails tied in nonslip knot at side of head.



APPLYING DRESSINGS TO HEAD INJURIES (cont'd)

To apply a dressing to a wound on top of the head:

1. Remove the dressing from the wrapper.
2. Grasp the tails of the dressing in both hands.
3. Hold it (white side down) directly over the wound.
4. Place it over the wound.

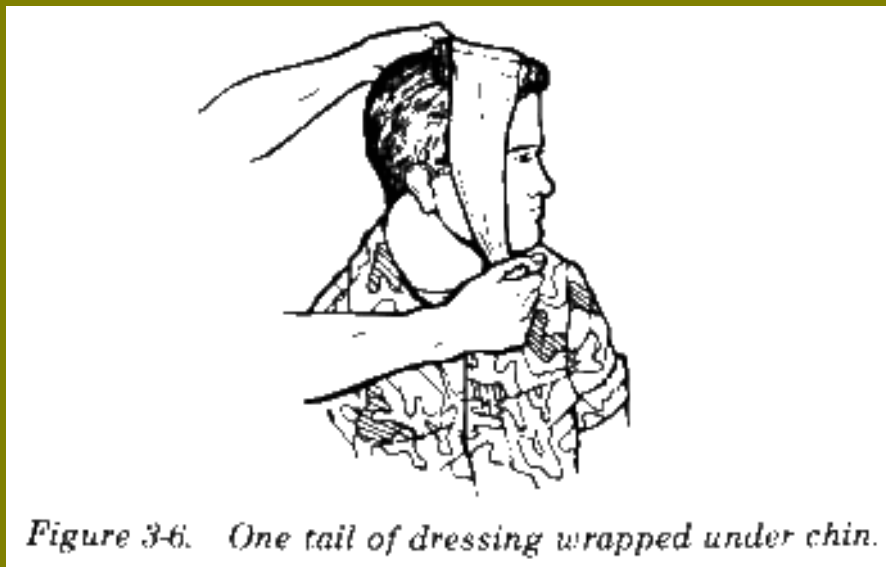


Figure 3-5. Dressing placed over wound.



APPLYING DRESSINGS TO HEAD INJURIES (cont'd)

5. Hold it in place with one hand. If the casualty is able, he may assist.
6. Wrap one tail down under the chin, up in front of the ear, over the dressing, r.



WARNING

(Make sure the tails remain wide and close to the front of the chin to avoid choking the casualty.)



APPLYING DRESSINGS TO HEAD INJURIES (cont'd)

7. Wrap the remaining tail under the chin in the opposite direction and up the side of the face to meet the first tail.



Figure 3-7. Remaining tail wrapped under chin in opposite direction.



APPLYING DRESSINGS TO HEAD INJURIES (cont'd)

8. Cross the tails, bringing one around the forehead (above the eyebrows) and the other around the back of the head (at the base of the skull) to a point just above and in front of the opposite ear, and tie them using a non-slip knot



Figure 3-8. Tails of dressing crossed with one around forehead.



Figure 3-9. Tails tied in nonslip knot in front of and above ear.



APPLYING DRESSINGS TO HEAD INJURIES (cont'd)

To apply a triangular bandage to the head:

1. Turn the base (longest side) of the bandage up and center its base on center of the forehead, letting the point (apex) fall on the back of the neck (Figure 3-10 A).
2. Take the ends behind the head and cross the ends over the apex.
3. Take them over the forehead and tie them (Figure 3-10 B).
4. Tuck the apex behind the crossed part of the bandage and/or secure it with a safety pin, if available (Figure 3-10 C).

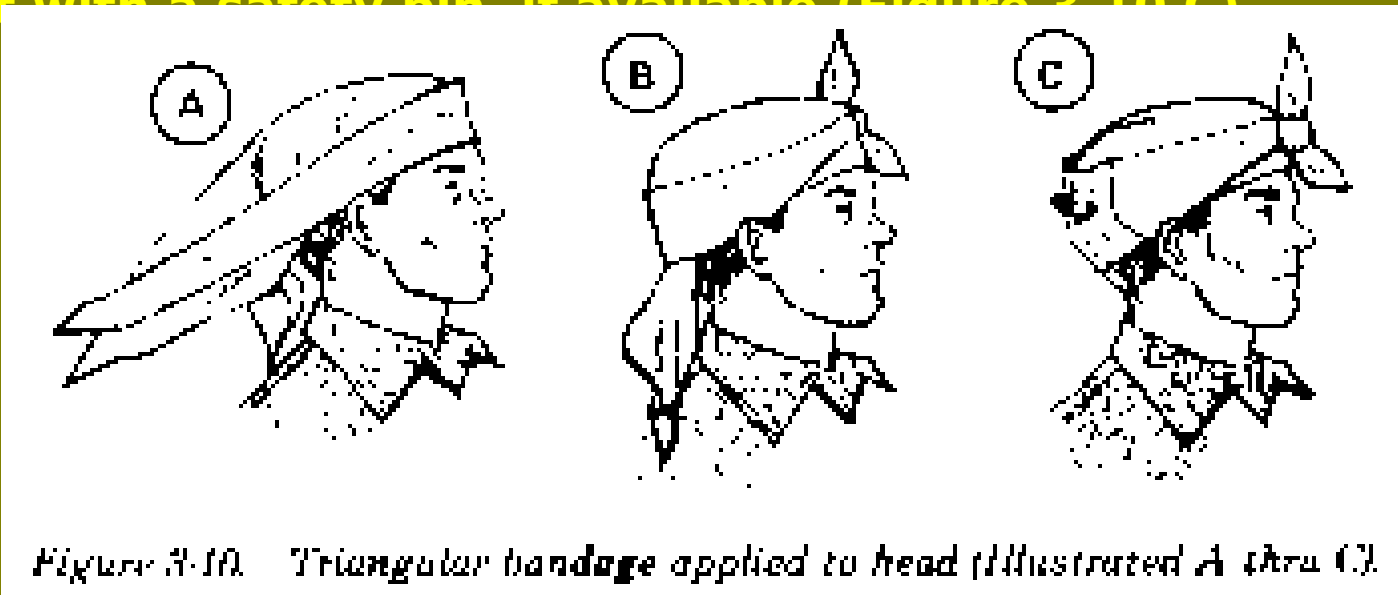


Figure 3-10. Triangular bandage applied to head (Illustrated A thru C).



APPLYING DRESSINGS TO HEAD INJURIES (cont'd)

To apply a cravat bandage to the head:

1. Place the middle of the bandage over the dressing (Figure 3-11 A).
2. Cross the two ends of the bandage in opposite directions completely around the head (Figure 3-11 B).
3. Tie the ends over the dressing (Figure 3-11 C).

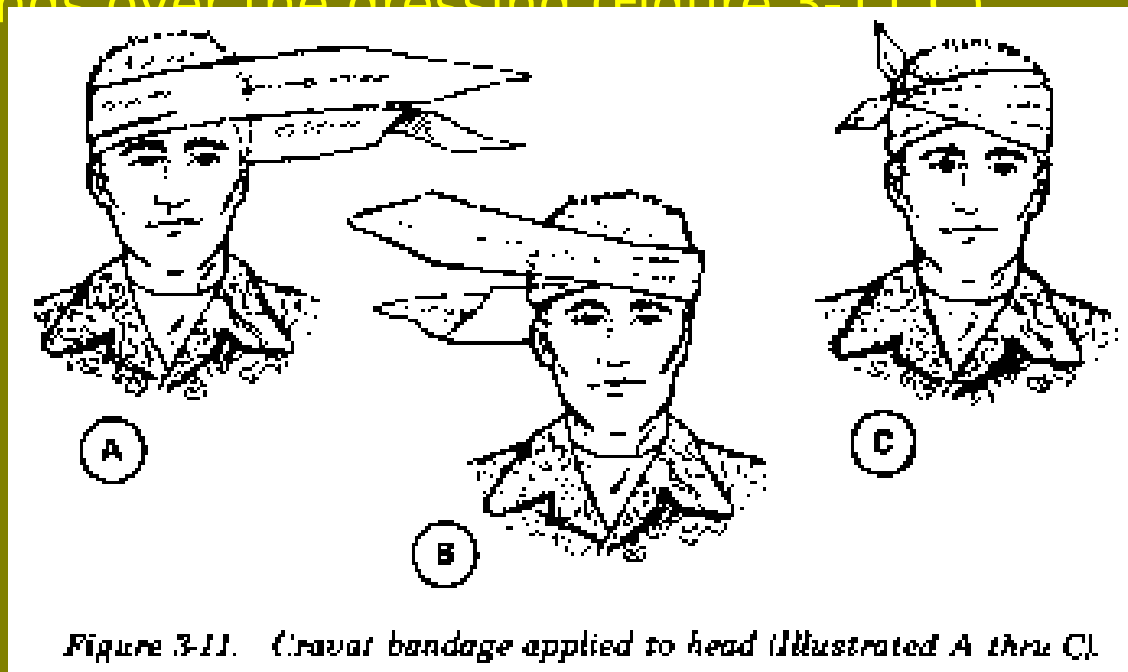


Figure 3-11. Cravat bandage applied to head (Illustrated A thru C).



FIRST AID FOR FACE AND NECK INJURIES



Face Injuries

Soft tissue injuries of the face and scalp are common. Abrasions (scrapes) of the skin cause no serious problems. Contusions (injury without a break in the skin) usually cause swelling. A contusion of the scalp looks and feels like a lump. Laceration (cut) and avulsion (torn away tissue) injuries are also common. Avulsions are frequently caused when a sharp blow separates the scalp from the skull beneath it. Because the face and scalp are richly supplied with blood vessels (arteries and veins), wounds of these areas usually bleed heavily.



Neck Injuries

Neck injuries may result in heavy bleeding. Apply manual pressure above and below the injury and attempt to control the bleeding. Apply a dressing. Always evaluate the casualty for a possible neck fracture/spinal cord injury; if suspected, seek medical treatment immediately.

***NOTE**

Establish and maintain the airway in cases of facial or neck injuries. If a neck fracture or spinal cord injury is suspected, immobilize or stabilize casualty.



Dressings and Bandages *Eye Injuries*

The eye is a vital sensory organ, and blindness is a severe physical handicap. Timely first aid of the eye not only relieves pain but also helps prevent shock, permanent eye injury, and possible loss of vision. Because the eye is very sensitive, any injury can be easily aggravated if it is improperly handled. Injuries of the eye may be quite severe. Cuts of the eyelids can appear to be very serious, but if the eyeball is not involved, a person's vision usually will not be damaged. However, lacerations (cuts) of the eyeball can cause permanent damage or loss of sight.



Dressings and Bandages *Eye Injuries*

Lacerated/torn eyelids.

Lacerated eyelids may bleed heavily, but bleeding usually stops quickly. Cover the injured eye with a sterile dressing. DO NOT put pressure on the wound because you may injure the eyeball. Handle torn eyelids very carefully to prevent further injury. Place any detached pieces of the eyelid on a clean bandage or dressing and immediately send them with the casualty to the medical facility.



Dressings and Bandages *Eye Injuries*

Lacerated eyeball (injury to the globe)

Lacerations or cuts to the eyeball may cause serious and permanent eye damage. Cover the injury with a loose sterile dressing. DO NOT put pressure on the eyeball because additional damage may occur. An important point to remember is that when one eyeball is injured, you should immobilize both eyes. This is done by applying a bandage to both eyes. Because the eyes move together, covering both will lessen the chances of further damage to the injured eye.

CAUTION

DO NOT apply pressure when there is a possible laceration of the eyeball. The eyeball contains fluid. Pressure applied over the eye will force the fluid out, resulting in permanent injury. APPLY PROTECTIVE DRESSING WITHOUT ADDED PRESSURE.



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Dressings and Bandages *Eye Injuries*

Extruded eyeballs

Soldiers may encounter casualties with severe eye injuries that include an extruded eyeball (eyeball out-of-socket). In such instances you should gently cover the extruded eye with a loose moistened dressing and also cover the unaffected eye. DO NOT bind or exert pressure on the injured eye while applying a loose dressing. Keep the casualty quiet, place him on his back, treat for shock (make warm and comfortable), and evacuate him immediately.

CAUTION

In certain instances both eyes are usually bandaged; but, in hazardous surroundings leave the uninjured eye uncovered so that the casualty may be able to see.



Dressings and Bandages Side-of-Head or Cheek Wound

Facial injuries to the side of the head or the cheek may bleed profusely. Prompt action is necessary to ensure that the airway remains open and also to control the bleeding. It may be necessary to apply a dressing.



Dressings and Bandages Side-of-Head or Cheek Wound

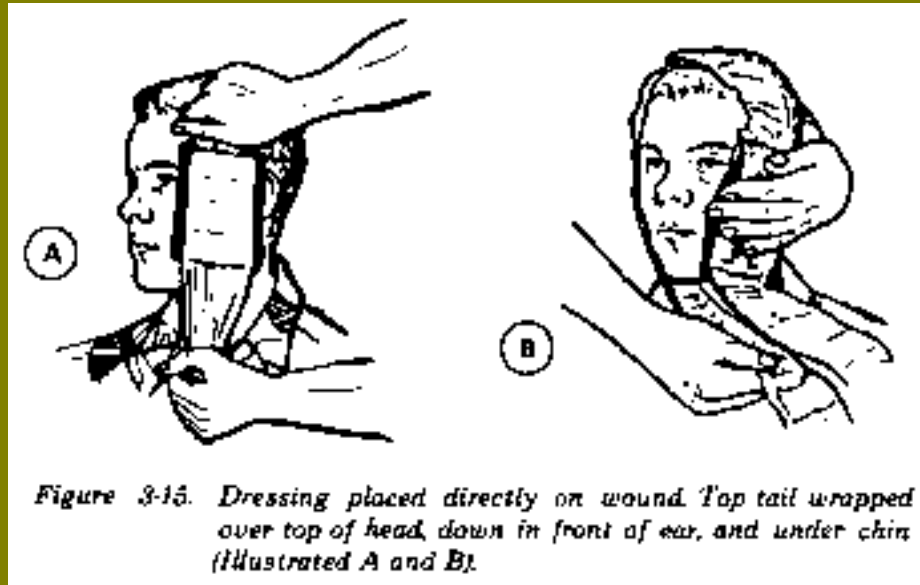
To apply a dressing:

1. Remove the dressing from its wrapper.
2. Grasp the tails in both hands.
3. Hold the dressing directly over the wound with the white side down and place it directly on the wound.
4. Hold the dressing in place with one hand (the casualty may assist if able). Wrap the top tail over the top of the head and bring it down in front of the ear (on the side opposite the wound), under the chin (Figure 3-15 B) and up over the dressing to a point just above the ear (on the wound side).



Dressings and Bandages Side-of-Head or Cheek Wound

To apply a dressing (cont'd):



NOTE

When possible, avoid covering the casualty's ear with the dressing, as this will decrease his ability to hear.



Dressings and Bandages Side-of-Head or Cheek Wound

To apply a dressing (cont'd):

Bring the second tail under the chin, up in front of the ear (on the side opposite the wound) and over the head to meet the other tail (on the wound side.)

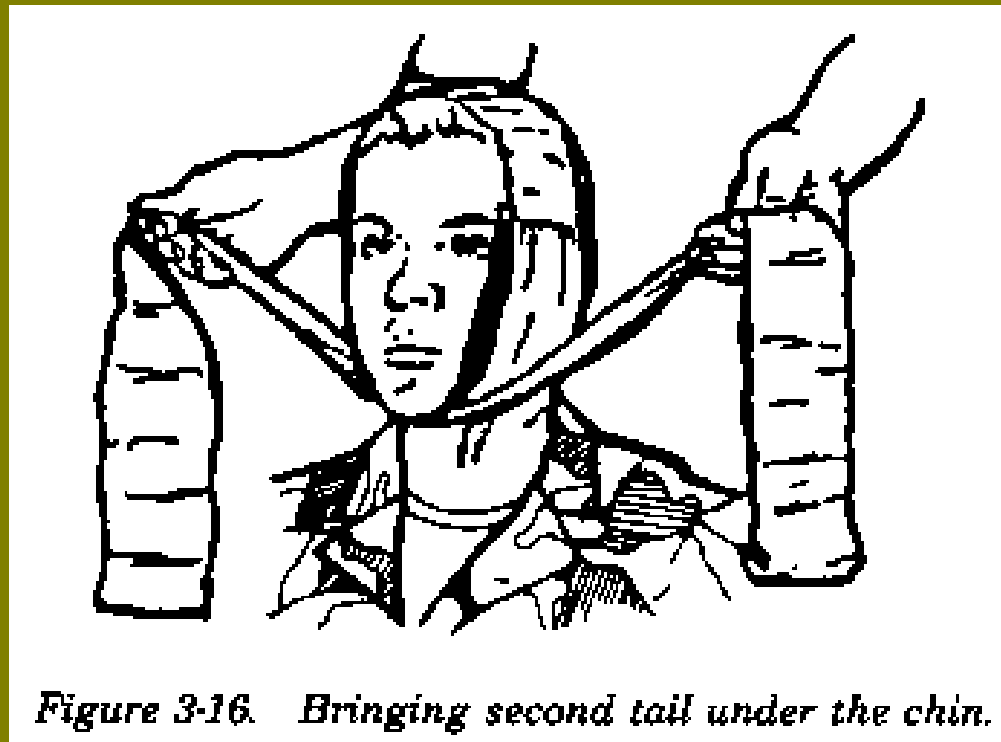


Figure 3-16. Bringing second tail under the chin.



Dressings and Bandages Side-of-Head or Cheek Wound

To apply a dressing (cont'd):

Cross the two tails (on the wound side) and bring one end across the forehead (above the eyebrows) to a point just in front of the opposite ear (on the uninjured side).



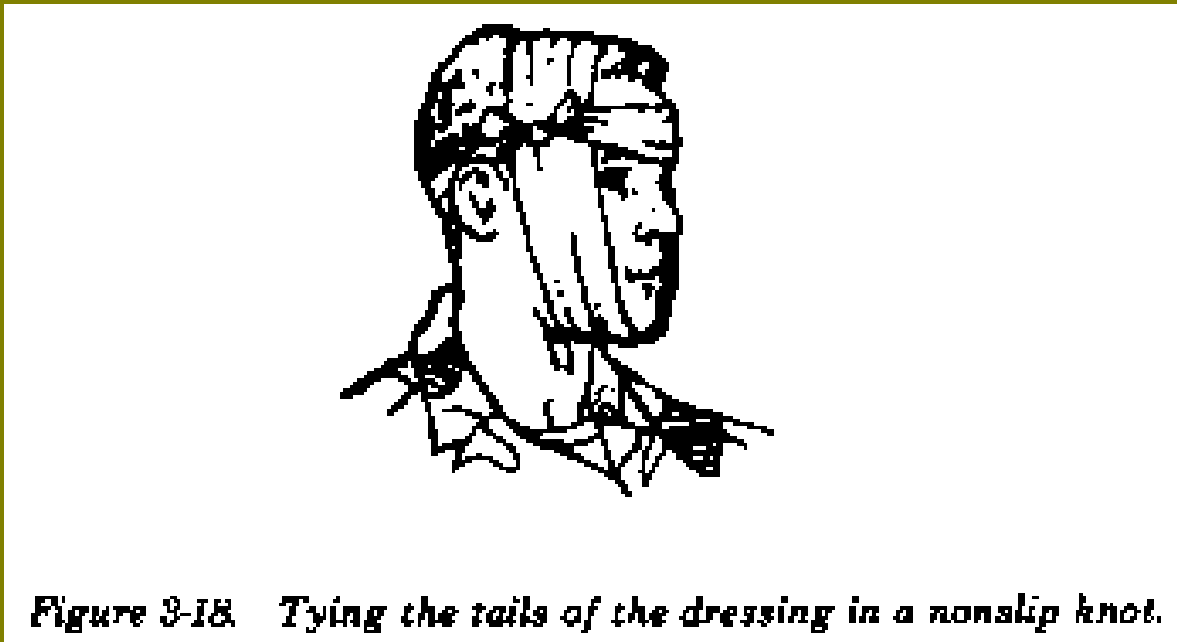
Figure 8-17. Crossing the tails on the side of the wound.



Dressings and Bandages Side-of-Head or Cheek Wound

To apply a dressing (cont'd):

Wrap the other tail around the back of the head (at the base of the skull), and tie the two ends just in front of the ear on the uninjured side with a non-slip knot.



Dressings and Bandages for Ear Injuries

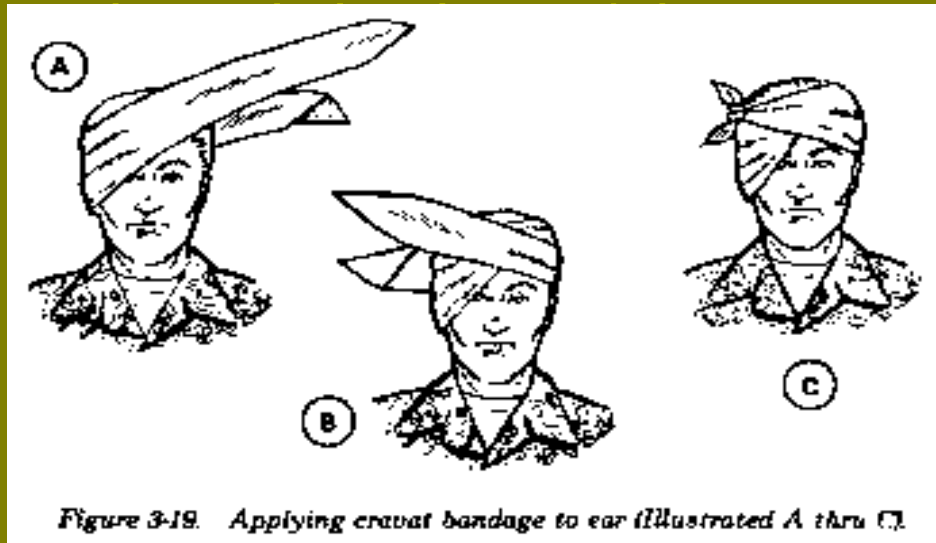
Lacerated (cut) or avulsed (torn) ear tissue may not, in itself, be a serious injury. Bleeding, or the drainage of fluids from the ear canal, however, may be a sign of a head injury, such as a skull fracture. DO NOT attempt to stop the flow from the inner ear canal nor put anything into the ear canal to block it. Instead, you should cover the ear lightly with a dressing.



Dressings and Bandages for Ear Injuries

For minor cuts or wounds to the external ear apply a cravat bandage as follows:

1. Place the middle of the bandage over the ear (Figure 3-19 A).
2. Cross the ends, wrap them in opposite directions around the head (Figure 3-19 B and 3-19 C.)



3. If possible, place some dressing material between the back of the ear and the side of the head to avoid crushing the ear against the head with the bandage.



Nose Injuries

Nose injuries generally produce bleeding. The bleeding may be controlled by placing an ice pack over the nose, or pinching the nostrils together. The bleeding may also be controlled by placing torn gauze (rolled) between the upper teeth and the lip

CAUTION

DO NOT attempt to remove objects inhaled in the nose. An untrained person who removes such an object could worsen the casualty's condition and cause permanent injury.



Dressings and Bandages for Jaw Injuries

Before applying a bandage to a casualty's jaw, remove all foreign material from the casualty's mouth. If the casualty is unconscious, check for obstructions in the airway. When applying the bandage, allow the jaw enough freedom to permit passage of air and drainage from the mouth.

1. *Apply bandages attached to field first aid dressing to the jaw.* After dressing the wound, apply the bandages using the same technique illustrated in Figures 3-5, 3-6, 3-7, and 3-8.



Dressings and Bandages for Jaw Injuries

“Figures 3-5 and 3-6”



Figure 3-5. Dressing placed over wound.



Figure 3-6. One tail of dressing wrapped under chin.



Dressings and Bandages for Jaw Injuries

“Figures 3-7 and 3-8”



Figure 3-7. Remaining tail wrapped under chin in opposite direction.



Figure 3-8. Tails of dressing crossed with one around forehead.

NOTE

The dressing and bandaging procedure outlined for the jaw serves a twofold purpose. In addition to stopping the bleeding and protecting the wound, it also immobilizes a fractured jaw.



Dressings and Bandages for Jaw Injuries

Apply a cravat bandage to the jaw:

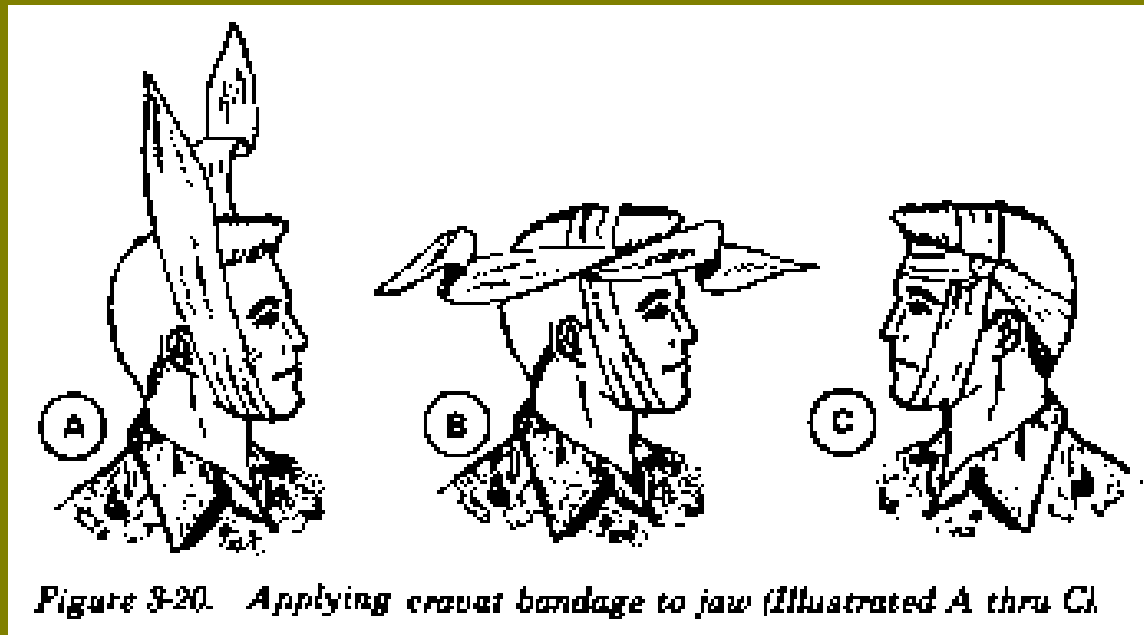
1. Place the bandage under the chin and carry its ends upward. Adjust the bandage to make one end longer than the other (Figure 3-20 A).
2. Take the longer end over the top of the head to meet the short end at the temple and cross the ends over (Figure 3-20 B).
3. Take the ends in opposite directions to the other side of the head and tie them over the part of the bandage that was applied first (Figure 3-20 C).



Dressings and Bandages for Jaw Injuries

Apply a cravat bandage to the jaw:

“Figures 3-20 A-C”



NOTE

The cravat bandage technique is used to immobilize a fractured jaw or to maintain a sterile dressing that does not have tail bandages attached.



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ANY

QUESTIONS?



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